

REMARKS

A typographical error has been corrected in claim 42 where the word “or” was inadvertently left out between “electronic” and “mechanical”. The remaining independent claims do have the correct phrase “electronic or mechanical”.

The Examiner rejects claims 42, 53, 55, and 56 under 35 U.S.C. §103 as unpatentable over Reihl further in view of Frank, further in view of Kunieda, further in view of Can. Thus four separate references were combined in rejecting these claims. Claim 46 is rejected under 35 U.S.C. §103 as unpatentable over Reihl.

Reconsideration is requested for the following reasons and particularly to point number 4 raised by the Examiner at page 3.

First, claim 43 recites in the preamble a method for controlling material flow in production of a product comprised of a plurality of individual mechanical or electronic assembly components as parts or part aggregates for assembly into the product. The body of the claim goes on to recite that the individual parts or part aggregates are transported in a controlled manner to predetermined, subsequent assembly process stations at an assembly production site for the product and assembling the product from the electronic or mechanical assembly components. Finally, in this recited environment, the claim indicates that production and delivery data along with quality data are stored in an individual transponder physically connected to each individual part or individual part aggregate and this data is then used in various ways as recited later in the claim 43 in connection with the assembly of the parts into the product. For all of the above the Examiner relies on Reihl as the primary reference and asserts that toner cartridges installed into already manufactured and delivered printers at customer locations can be treated as an assembled product. However, this interpretation is not possible for the following reasons. The process described in

Reihl applies to a printer 1 which is completely manufactured and delivered to a customer already before the toner containers are inserted into the printer. See Reihl column 1 lines 24 to 61 in which the employment of printers in computer centers are described and the processes of changing individual components such as developer stations and toner at the computer center site. In addition, Reihl also describes the process of recycling toner containers for multiple use in the same or different printers see for example, column 2, last paragraph. Also see Figure 2 and corresponding text column 7, second paragraph describing the process in which only the containers 2 are supplied to the transport vehicle 10 that outputs the containers in the direction to the printing center (that is the computer center at which the printer is employed).

Based on the above, the Examiner's interpretation that Reihl discloses assembly of a product is incorrect. Note further that the end of claim 42 refers to assembling the product from assembly components which are therefore plural components. In Reihl only one component, namely the toner container, is placed in the printer when it is empty and needs replacing since it has been worn out.

The key disclosure relied on by the Examiner in Reihl in his assertion that Reihl teaches assembly of a product is column 6, lines 43-47 but this only discloses that a supply container that has once been taken is not inadvertently filled with additional unsuitable consumables, and a malfunction is avoided when the container is reintroduced into the same or into a different printer. This is unrelated to multiple components being assembled to form a product.

For the above reasons, the use of Reihl for storing information in a transponder located on a toner container is not relevant to assembly of a product from multiple components.

Claim 43 next distinguishes by reciting recording quality data comprising at least one tolerance value range regarding the individual mechanical or electronic assembly components, storing the quality data in an individual transponder physically connected to each individual part or individual part aggregate, before storage reading and checking the quality data comprising the at least one tolerance value range at a quality check station of the assembly production site and if the quality check yields that the mechanical or electronic assembly components as the delivered parts or part aggregates lie outside of the at least one tolerance value range, rejection and return is automatically activated. For all of these features relating to stored quality, the Examiner relies on the toner expiration date stored in the transponder on the toner container at page 5 second paragraph of the office action. Thus the Examiner asserts that the recording toner expiration date in the transponder constitutes recording quality data comprising at least one tolerance value range. However, it is clear that a single expiration date has nothing to do with a tolerance value range. A single date cannot be a “range”. Nothing within Reihl teaches or suggests to check within the printer during insertion of the toner container whether the stored expiration date for the toner is within a range.

Furthermore, the quality data referred to in claim 42 is related in claim 42 to the electronic or mechanical components, whereas the expiration date of Reihl is related to a chemical substance – namely toner – which is not an electronic or .mechanical assembly component

A further difference in Applicant’s claim 42 language is the recitation of reading and checking of quality data performed at the quality check station before storage. This is also clearly not found in Reihl. Reihl only checks an expiration date on a toner container in the printer. See table 1 beneath columns 15 and 16 in Reihl

where the printer checks whether a valid container has been installed. But this checking of whether a toner expiration date is correct in the printer has nothing to do with Applicant's claim 42 claim language of before storage reading and checking quality data at a quality check station of the assembly production site where, if the part lies outside of the at least one tolerance value range, rejection and return is automatically activated. This tolerance value range in claim 42 is thus not read with a component installed in the product, but before it is installed in the product. Reihl teaches directly away from this since he checks the toner expiration date of a toner after the toner has been installed in the printer. Thus it is not possible that Reihl could teach this portion of Applicant's claim language in claim 42.

The Examiner also relies on Reihl column 7, lines 13-15 at the bottom of page 5 of the Office Action. This discloses that after the containers 2 are cleaned they are passed through a testing station 6 at which they are checked for mechanical damage as well as for leaks. Subsequently the cleaned and tested containers 2 are intermediately stored in a warehouse 7. But this is not a test for tolerance range data stored in a transponder. Therefore this disclosure cannot suggest making a quality check as recited in claim 42 for a tolerance range before storing the component prior to assembly. At Reihl column 7, lines 13 to 15, at the test station only the toner bottle is checked for mechanical damage and for leaks, but there is no check made with respect to the expiration date which is what the Examiner specifically relies on for the quality tolerance range recitation of claim 42.

For Applicant's claim 42 language of before storage reading and checking the quality data of the at least one tolerance value range at the quality check station and if the delivered parts lie outside of the at least one tolerance value range, rejection and return is automatically activated, the Examiner relies at page 6, second

paragraph of the office action on Reihl column 12, lines 2-4. But this disclosure only relates to where the toner container has already been installed in the printer and a check is carried out to see whether the toner recipe is acceptable (type of toner) before the developer station is enabled for printing. But this is unrelated to checking the expiration date, which the Examiner relies on the for quality tolerance range. But here the container has already been placed in the printer which is directly contrary to Applicant's claim language requiring that the quality check is done before the component is finally assembled into a product. Thus Reihl teaches directly away from Applicant's invention.

Reihl column 12, lines 2-4 only discusses enabling for printing if a toner receipt is acceptable, but does not disclose any rejection and return and does not disclose to automatically activate the rejection and return. The check to determine whether or not the toner is of the right type is only to determine whether the developer station is enabled for printing. But this is not before a respective storage.

The other three references relied on by the Examiner do not satisfy the above numerous deficiencies of Reihl but were only cited for other features.

Claims 43-49 and 51-54 distinguish at least for the reasons noted with respect to claim 42 and also by reciting additional features now suggested.


System claim 55 distinguishes at least for the reasons noted with respect to claim 42 and system dependent claims 57-59 distinguish at least for the reasons noted with respect to claim 55 and also by reciting additional features now suggested.

Dependent claim 60 distinguishes at least for the reasons noted with respect to claim 42 and also by reciting additional features not suggested.

Allowance of the Application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Respectfully submitted,

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